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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,208

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Yutaka Watanabe

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WENDEROTH, LIND & PONACK L.L.P.

2033 K. STREET, NW

SUITE 800

WASHINGTON, DC 20006

EXAMINER

FAN, HONGMIN

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/524,208

Applicant(s)

WATANABE ET AL.

Examiner

Hongmin Fan

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 10 is/are rejected.
- 7) ☒ Claim(s) 7, 9 and 11-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakakibara et al (US 4618948).

As to claim 1, referring to Fig. 1 and 10, Sakakibara et al disclosed an apparatus for detecting obstructions behind vehicle having the claimed limitations, comprising:

1) a scanning mechanism capable of emitting beams having a predetermined divergence angle consecutively in a plurality of different directions, and receiving the reflected waves from an obstacle for each direction and detecting the obstacle within the emission range;

2) a sonar circuit 4 acts as a distance measuring means (col. 2, line 62-64);

3) a display signal processing circuit 6;

4) a display 7.

As to claim 6, referring to Fig. 10, Sakakibara et al further disclosed an obstacle image in which an arc figure is shown with its center at the emission point of the beam and its radius is a distance measured by the apparatus.

As to claim 8, the claim is interpreted and rejected as claim 6.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al, in view of Weber et al (US 6061002).

As to claim 2, Sakakibara et al did not disclose calculating an average distance. However, to reduce error, the average distance values are used. Weber et al teach a device for parking motor vehicle using average distance as output (col. 2, line 3-4). Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use average distance in Sakakibara's apparatus in order to reduce error.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al, in view of Weber et al, further in view of Hemed (US Pub. 2003/0102965).

As to claim 3, Sakakibara et al further disclosed calculating the distance based on a time period between transmission of a signal and reception of the reflective signal (col. 5, line 31-42).

Sakakibara et al did not disclose a predetermined threshold value. However, it is known to use a predetermined threshold value to reduce error. Hemed teaches a vehicle device for detecting the reflection of a surface using a predetermined threshold value to determined valid reflection signals (¶0023). Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use average a predetermined threshold value in Sakakibara's apparatus in order to reduce error.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al, in view of Sawanmoto et al (US 6311119).

As to claim 4, Sakakibara et al did not disclose calculating a shortest distance. However, to keep the vehicle safer, it is known to use a shortest distance calculated. Sawanmoto et al teach a vehicle control system using a shortest distance as the measurement (col. 6, line 52). Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use a shortest distance in Sakakibara's apparatus in order to keep the vehicle safer.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al, in view of Sawanmoto et al, in view of Weber et al, further in view of Hemed.

As to claim 5, Sakakibara et al further disclosed calculating the distance based on a time period between transmission of a signal and reception of the reflective signal (col. 5, line 31-42).

Sakakibara et al did not disclose a predetermined threshold value. However, it is known to use a predetermined threshold value to reduce error. Hemed teaches a vehicle device for detecting the reflection of a surface using a predetermined threshold value to determined valid reflection signals (§10023). Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use average a predetermined threshold value in Sakakibara's apparatus in order to reduce error.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al, in view of Yamada (US 7126460).

As to claim 10, Sakakibara et al did not disclose to change brightness of the image according to obstacle distance. However it is known to change the brightness in order to show different distance. Yamada teaches a surrounding conditions display apparatus in which obstacle is displayed with different brightness according to its distance. Therefore, it would have been obvious to one of ordinary skills in the art at the

time of the invention to display an obstacle with different brightness in Sakakibara's apparatus in order to show difference between distances (Abstract, line 7-11).

***Allowable Subject Matter***

Claims 7, 9 and 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hongmin Fan whose telephone number is 571-272-2784. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HF



JEFFERY HOFSSASS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600